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SANDFORD FLEMING MOVE

On Friday, October 28, the main computer terminal in the Sandford Fleming Building shut its doors. On Saturday morning it reopened in the Engineering Annex. The photo on this month's cover shows the Terminal just prior to completion.

The Terminal is the end result of months of planning, delays and renovation. Soon after the fire in the Sandford Fleming Building, it became obvious that the location of the old Sandford Fleming Terminal would be required to house the new DEC 1060 time-sharing machine. New space for the terminal had to be found and designed.

Users of the old Sandford Fleming facilities will find that there are several improved features in the Terminal site. Not the least of these features is a newly renovated room which should be an improvement over the old site. Another plus for the new site is that it has been designed so that Operators, Advisors and Terminal Co-ordinator are all within steps of one another. This design should facilitate the overall services for our customers. A special benefit is in store for EUT users. For the first time EUT will have central air conditioning. Anyone having used EUT on a warm day will understand just what a benefit this is.

Users of the new site will notice that a new card reader has been acquired for the terminal. The old IBM 2501 card readers will not function on the extended channel running to the Annex. The replacement Documation 6501 will, however. A second 6501 reader is due to arrive shortly. Until the arrival of the second reader, users finding longer than usual queues at the reader may have the Operator read their deck in behind the counter on the 2540 reader/punch.

It should be noticed that the new readers are not capable of mark sense. Users of this service may take their decks to the tape/disk area in Room SF106 of the Sandford Fleming Building.

Hours of operation for the new site will be the same as those for the old site. We hope that the changeover will result in a minimum of inconvenience and, in the long run, will provide a better environment for your computing needs.

Don Gibson

UTCC RATE INCREASE

As announced in HOTNEWS, broadcast messages and a direct mail campaign, the Advisory Committee has approved a 7.5% increase on most UTCC service rates. Additional funds have been added to each department's computing budget to meet this increase. New pricing became effective on October 31, 1977. A detailed breakdown of the new rate schedule is contained in an update to Section 2 of the USERBOOK.

We regret that this rate increase was necessary but, like everyone else, we have been hit by inflation of the operating costs in everything from machine rentals to telephone charges.

cont'd...

UTCC RATE INCREASE cont'd

You may rest assured that UTCC will spare no efforts to make such pricing adjustments as infrequently as possible and attempt to minimize any disruptions they may cause you. We value your support and look forward to a continuing and growing utilization of UTCC services by the University community.

UTCC encourages you to contact your Computing Representative if you have any questions.

Bert McNeil

MVS STATUS REPORT

UTCC's Phase One development and testing of MVS 3.7 with JES 4.1 for the S/370-165-II is nearing completion. So far, we have had six user tests of MVS on Friday evenings from 6:30 to midnight. Each test has been used by UTCC to track and validate new components and functions as they are added to the base system. Users experiencing problems due to undocumented MVS/MVT incompatibilities during user tests are requested to contact on duty Advisors to complete a Problem Report.

Test 6 Statistics

During all user tests, UTCC collects resource utilization and performance data in order to determine the workload and throughput of the system. The following load was encountered during Test 6:

HSJS #JOBS	1408
GPJS #JOBS	841
HSJS & GPJS TCB CPU MINUTES	100
TSO, #SESSIONS	66
TSO, CONNECT HOURS	39
TSO, TCB CPU MINUTES	28
TOTAL, CPU MINUTES	297
%, PROBLEM STATE	42
AVERAGE, MILLIONS instructions/sec	1.87

System Reliability/Maintenance

System reliability has been considerably enhanced since our first user tests. JES2, in particular, has been the object of intensive attention and all major reliability problems have been corrected. This improved JES2 reliability was demonstrated during Test 6, in which no JES2 or remote problems were encountered.

The base MVS 3.7 System is also being slowly improved. At the time of Test 6, SMP 3 (SU 63) and Hardware Error Recovery Enhancements (SU 55) had been applied to the system. System enhancements in the test phase are:

Scheduler/IOS (SU16)
Dump Improvements (SU33)

In addition the System Security Enhancement (SU32) is scheduled.

At the time of writing, there are 34 outstanding system problems, of which 23 are awaiting resolution by IBM. About half of these problems have a medium to severe impact on the whole system or an individual user.

cont'd...

MVS STATUS REPORT cont'd

Future User Tests

In the upcoming weeks, UTCC will endeavor to complete Phase One testing of MVS. Phase One will be complete when all supported components of the system work to our satisfaction. The following components will be added in future tests:

- batch & TSO SCRATCH
- HASP to HASP
- trailer page & Batch charging algorithms
- TSO charging algorithm
- WYLBUR charging algorithms
- GOULD charging algorithms
- full complement of TSO commands
- full complement of WYLBUR commands

Watch HOTNEWS and signs announcing dates, times and services available for the next MVS test. We thank all those who have participated in the last six User Tests and offer the user community free coffee, donuts and computing at our next MVS User Test.

Walter Berndl

DECSYSTEM-10

UTCC has good news for its users. The Sandford Fleming Terminal is scheduled to be moved at the end of October, 1977. (refer to the article, SANDFORD FLEMING MOVE, in this issue of COMPUTERNEWS). As a result, installation of the DEC 1060 system is expected to commence the first week in November.

The operating system will be the standard DEC TOPS10. Until UTCC is more familiar with TOPS10, it will run unmodified except for the addition of several local accounting routines.

These routines:

a) report the session charge to users at logoff
b) check user eligibility at logon
c) report user account decrement at logoff

Below is a rough sequence of the major projects involved with DEC 1060 installation. It should be noted that the time estimates are conservative, and could change. Although UTCC is attempting to make the service available as quickly as possible we do not want to introduce a system which has not been fully checked out, and which does not have proper accounting.

In the next issue of COMPUTERNEWS, the charging algorithm, advisors, hours of service and additional application software products will be discussed.

Users with questions and suggestions concerning user training are asked to contact Stan Yagi or any of the Services staff.

Stan Yagi

DECSYSTEM=10 cont'd

ACTIVITY	RESPONSIBILITY	TIME ESTIMATES
Annex Preparation	Physical Plant	Oct. 10 - Oct. 31
Move S.F. Terminal	UTCC	Oct. 31 - Oct. 3
Prepare DEC site	Physical Plant	Nov. 3 - Nov. 6
Install DEC 1060	DEC	Nov. 6 - Nov. 19
Install Operating System	DEC	Nov. 19 - Dec. 4
Install Language Proc. and Libraries	DEC and UTCC	Dec. 4 - Dec. 11
Accounting Routines	UTCC	Dec. 11 - Jan. 1
User Training, Operator Training	UTCC and DEC	Jan. 1 - Jan. 29
UTCC Staff Familiarization	UTCC and DEC	Jan. 1 - Jan. 29
Free User Test	UTCC	Jan. 29 - Feb. 26

NON-CREDIT SHORT COURSES

Beginning the end of October, the following short courses will be offered by the Computer Centre. Please note that only persons holding a valid UTCC Customer Account Number (CAN) are eligible to attend. If you wish to register, please contact the Information Office, Room 206, 11 King's College Road (Engineering Annex), 978-4990.

1. INTRODUCTION TO COMPUTING

Prerequisites: Although there are no prerequisites for this course, persons with some experience using prepackaged programs such as SPSS may find the kind of information given at this level beneficial.

Dates: October 31, November 1, 2, 3 and 4

Time: 12:00 - 1:00 p.m.

This course is aimed at the non-programmer. While it is unlikely that you can become a programmer in five one-hour sessions, you should come away from the course with an idea of what computers are, what they can and cannot do, and how to use ours for solving simple problems.

cont'd...

NON-CREDIT SHORT COURSES cont'd

2. INTRODUCTION TO STATISTICAL PACKAGES AT UTCC

Prerequisites: None

Date: November 2

Time: 4:00 - 5:00 p.m.

This course will take the form of a one hour presentation for users and potential users of UTCC statistical packages, both batch and interactive. Capabilities of the various packages including SPSS, SCSS, and SAS will be discussed. In particular, comparisons between them will be made to help the user decide which is best suited to his/her needs.

3. 'WYLBUR' FOR PROGRAMMERS USING CARDS

Prerequisites: Experience running batch jobs on the S/370-165-II including the use of simple JCL and at least one source language compiler or application package.

Dates: November 7, 8 and 9

Time: 12:00 - 1:00 p.m.

WYLBUR is a system designed to allow the user to do work on the computer from a typewriter-like terminal connected to the system by telephone lines . The two major applications of WYLBUR are computer programming and text processing. Programmers at typewriter terminals can use WYLBUR to type programs, store them on disk, submit them for batch processing and examine parts of the output prior to printing on the highspeed printer. WYLBUR can relieve the programmer of many of the problems and delays usually associated with card input.

4. INTRODUCTION TO 'WYLBUR' FOR PROGRAMMERS USING TSO

Prerequisites: Same as Course #3 and experience running batch jobs through TSO or a similar RJE system.

Dates: November 14, 15 and 16

Time: 12:00 - 1:00 p.m.

WYLBUR offers good editing capabilities, edit recovery and fast response to editing and remote job entry/output commands. WYLBUR does not offer any interactive programming in FORTRAN, PL/I, etc. but does have an EXEC language analogous to TSO's CLIST facility. This can be used to write simple interactive programs, as well as to prepare JCL under program control.

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NON-CREDIT SHORT COURSES cont'd

5. INTRODUCTION TO STATISTICAL ANALYSIS SYSTEM (SAS)

Prerequisites: Some programming experience essential

Dates: November 8, 10, 15 and 17

Time: 4:00 - 5:00 p.m.

SAS is perhaps the most powerful and flexible of the statistical packages at UTCC. It has its own "language" syntax with limited programming capabilities and, similar to SPSS and DATATEXT, a statistical analysis component. Those wishing to know more about SAS before enrolling in this course should plan to attend Course #2.

6. INTRODUCTION TO MATHEMATICAL PACKAGES AT UTCC

Prerequisites: None

Date: November 16

Time: 4:00 - 5:00 p.m.

The objectives of this one-hour discussion are to:

.Outline the mathematical packages available at UTCC in the areas of numerical analysis, optimization, and simulation.
.Give an overview of each package pointing out the particular strengths and possible problems that might occur during usage.
.Discuss the use of USERBOOK 3.7 modules for locating general information, JCL, and documentation.
.Basic JCL to use the packages and JCL to print documentation and source listings.

7. INTRODUCTION TO OS JOB CONTROL LANGUAGE (JCL)

Prerequisites: Course #1 or equivalent background knowledge

Dates: November 21, 22, 23, 24 and 25

Time: 5:00 - 6:00 p.m.

JCL is a set of control statements which must be supplied to the operating system to give it the information required to initiate, process and complete a job or unit of work. These statements communicate details such as who the user is, what he/she wants done, how much time it will take, how much space is required, what devices will be involved, what data and problem-solving routines are to be used, where they are located and where the results are to be printed or stored. This course is intended to get the student started by presenting the basic JCL statements, their uses and coding rules.

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NON-CREDIT SHORT COURSES cont'd

8. INTRODUCTION TO STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES (SPSS)

Prerequisites: Background in social science statistics plus Course #1 or equivalent. Those who have had no previous experience with OS JCL should also plan to attend Course #7.

Dates: November 23, 25, 30 and December 2

Time: 3:00 - 4:30 p.m.

This course is aimed at Social Science users who plan to use the computer to process their data. SPSS is an applications oriented programming language which contains powerful routines for the analysis of data while allowing users to manipulate their data with simple FORTRAN-like statements. The course will be an introduction to SPSS for users who are not familiar with the package. It would not be suitable for those who already have a working knowledge of SPSS.

9. INTRODUCTION TO SPSS CONVERSATIONAL STATISTICAL SYSTEM (SCSS)

Prerequisites: Experience with batch SPSS and TSO.

Dates: December 6, 8, 13 and 15.

Time: 4:00 - 5:00 p.m.

Used through TSO, SCSS is a truly interactive system giving immediate results to problems such as correlation, regression, etc., working with either previously saved SPSS files or newly created ones.

THE UTCC ACCOUNTING OFFICE

The Accounting Office forms part of the Administration Group of the University of Toronto Computer Centre and is responsible for Customer Account Numbers (CANs) and Service Access Codes (SACs) at UTCC. These include:

1. Opening and modifying Accounts and Access Codes.
2. Advising users of the status of their Accounts and Access Codes.
3. Distribution of monthly statements and billings.

Detailed information on accounting policies and procedures are outlined in USERBOOK Section 2.

Clerks responsible for managing the system and assisting users are:

Gail Cavers (978-8703), Systems Access Codes (SAC)

Merton Hunte (978-8702), Customer Account Numbers (CAN)

Sylvia May (978-7148), Accounting problems re CANS and SACS.

Business hours are Monday - Friday 9 a.m. - 4:30 p.m. (9 a.m. - 4 p.m. July and August). The Accounting Office is located in Room 206, Engineering Annex.

We would welcome suggestions from users on ways in which we can improve our service to you.

Clara Silva

THE ADVISORY COMMITTEE ON COMPUTING FACILITIES AND SERVICES

The Advisory Committee on Computing Facilities and Services (ACCFS) is a committee consisting of members of the University computing community. The Director of the Computer Centre is one of the members of the Advisory Committee. The task of the ACCFS is to review policies and to make recommendations to the University Administration with respect to computing facilities and services in light of the University's general and divisional objectives.

As of September, 1977, the members of the ACCFS are as follows:

Professor K.C. Smith - Chairman
Department of Electrical Engineering

Professor J.D. Bossons
Institute for Policy Analysis

Professor M.J. Dignam
Department of Chemistry

Dr. L. Endrenyi
Department of Pharmacology

Professor J.N.P. Hume
Department of Computer Science

Professor E.S. Lee
Planning and Resources
Department of Electrical Engineering

Mr. R. McGimpsey - ex officio
Business Information Services

Mr. R. Mikkor - ex officio
University of Toronto Computer Centre

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THE ADVISORY COMMITTEE cont'd

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Executive Secretary
Medical Computing Centre

Professor P.H. Salus
Academic Affairs
Scarborough College

Mr. D.M. Smithers
Office of the Comptroller

Professor E.V. Swenson
Department of Computer Science

Dr. J.C. Wilson - ex officio
Student Record Services

Professor S.S.M. Wong
Department of Physics

Stan Yagi

PHYSICS TERMINAL USER FORUM

On September 28, an open forum was held for users of the Physics Terminal; twenty people and one kitten were in attendance. The major topics of discussion were the upcoming changes to the terminal, the DEC 1060 time-sharing machine, the status of MVS, and the TRY-Centre Task Force Report.

The DEC 1060 machine should be up and running early in 1978. An extensive array of language processors will be available as well as two editing systems. The initial configuration will be 256K words of memory operating under TOPS10 with 30 dial-up ports. Communication with the S/370-165-II will be provided by a 50KB link.

Most of the bugs have been ironed out of MVS. The remaining procedure is to tune the system. The next, and possibly last, Phase I User Test will occur in late October. MVS should have no effect on the amount of user disk space available.

The TRY-Centre Task Force Report was discussed. Thus far, the only aspect which has been examined is financial feasibility. The actual operation and management of such a centre were not considered. Copies of this Report are available on request and any comments, opinions, etc., would be welcomed.

A local change affecting Physics Terminal users will be the installation of ceiling sound baffles to reduce noise levels. These baffles will assist in alleviating the high noise levels caused by the cramped nature of the Physics Terminal quarters. Other local changes that will affect Physics Terminal users will be the arrival of a CDC Cyber 18-05 RJE station early in 1978, and the acquisition of more interactive terminals. Due to lack of space, another room will have to be secured in order to accommodate the new terminals. Ultimately, it may be necessary to move the Physics Terminal to larger quarters.

The meeting drew to a close with a discussion of the possible hardware upgrades at UTCC. Some concern was expressed regarding the reliability of future configurations and their susceptibility to such rare occurrences as fires.

Bob Chambers

ERINDALE COMPUTER USER FORUM

On Sept. 26, 1977, a number of UTCC personnel from all levels of management met with the computer users at Erindale College. The users group, although not large in number, represented a good cross section of the users at Erindale.

In the preliminary discussion, alternatives to reducing the high speed job stream load at Erindale were proposed. Two alternatives presented were 1) an increase in line rate from 4800 baud to 9600 baud; and 2) expand the PDP system to accomodate local SP/K processing.

A major discussion on the TRY (Toronto, Ryerson, York) Consolidation Report produced some very interesting and relevant questions. Rein Mikkor gave a brief summary to those who were unfamiliar with the report. He also commented that the financial aspects of the report were sound and reliable. Many of the users' questions were related to the communication problems arising from another level of bureaucracy in the supra-structure. These problems further reduce the importance of individual input into the Centre. Other concerns dealt with possible increases for ports and line charges, and the division of power amongst the three members of the Corporation. The users were asked to document their problems and queries and forward them to the Chairman of the Advisory Committee.

Clem Diplacido

USER FORUM AT SCARBOROUGH

A small but attentive group was present at the user forum held at Scarborough College on October 3. The meeting was held in the Council Chambers and was chaired by Professor W. Enright who is also Chairman of the Computer Committee at Scarborough. UTCC staff attending included Stan Yagi, Ralph Lombardi, Rein Mikkor, Bert McNeil and Ihor Prociuk.

The meeting opened with a description, by Ihor Prociuk, of the remote terminal configuration at Scarborough. The concensus of the users present was that it was still too early to make any judgements concerning the system. Users did, however, request UTCC staff to attempt to resolve incompatabilities (in both the Reader and Printer) between Scarborough and other UTCC terminals.

Stan Yagi detailed the progress of the installation of the DEC 10 time-sharing computer. He also spoke on some of the hardware and software aspects of the new machine. A computer solely dedicated to interactive use would mean that remote stations would have to acquire new interactive terminals to meet a growing demand; there was some question as to who would be funding the purchases.

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USER FORUM cont'd

The status of MVS testing was presented by Rein Mikkor. User tests over the summer months helped resolve many problems that might occur when MVS is installed at UTCC as a permanent fixture. The final test on October 21 would conclude Phase 1 of the testing. During Phase 2 MVS will be active in the system during certain periods without specifically informing users. These unannounced implementations will expand until an essentially error-free MVS system is in use.

Rein Mikkor presented some of the findings of the TRY Task Force Report. The financial advantages of forming a central computer centre for U. of T., Ryerson and York were outlined. Some of the users present felt that the savings were only marginal. The prospect of having a larger computer with faster turnaround would possibly be outweighed by the fact that the Regional Centre would not be "in tune" with the user. Some Scarborough users felt that the Report did not address itself fully to the overall organizational structure of the entire concept and the problems which might arise if individual universities had differing views on hardware and software acquisitions. Both users and UTCC staff felt that more study should be done in this area.

The two-and-one-half-hour meeting closed with a thanks by Professor Enright to all those who attended and assurances from UTCC staff that comments and questions presented at the meeting would be taken into account in future policy planning.

Ihor Prociuk

P.S. ... P.S. ... P.S. ...

STRUCTURED PROGRAMMING

Structured Programming has been around for quite a while. Its basic concepts (don't use GO TO's; use IF-THEN-ELSE constructs; use single-entry and single-exit modules), combined with other techniques such as top-down design, are well-known. In practice, the most useful benefits are not only the ease with which detected bugs can be corrected, but also the ease with which new specifications can be implemented. Of course, we try to achieve only classy, high-level bugs. However, these benefits can create problems. It may appear that a "spec change" is too straightforward, in that the system goes through various generations incorporating improvements. While the end result is certainly desirable, it would be more beneficial to generate a better designed system in the first place.

To this end, Structured Analysis and Structured Design have come into being. Structured Analysis concentrates on developing a clear picture of what the new system can do, using tools such as structure charts and data flow diagrams. One method is to begin with a clear definition of what the system currently does, defining the current data flow - what information goes where - in easily understood diagrams. Proceeding from there, the diagrams are reshaped to fit the new system's needs.

When the analysis stage is finished, Structured Design takes over. Here the emphasis is on the connections between modules; each module is given single functional purpose, wherever possible.

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P.S. ... STRUCTURED cont'd

By analysing the data each module requires, as well as by analyzing the references it makes to other modules, we can prevent certain types of bugs from occurring and provide for easy program modification later on. Changing to a new module often results in the appearance of bugs in other modules. In Structured Design this common "Snowball" effect is virtually eliminated; that is, Structured Design enables us to see which modules are affected when a change to another module is made.

We wonder what new fields "Structuring" can be applied to. Computer science education absorbs new methodologies; the result is that new students sometimes take them for granted. The younger the student, the more refined his or her initial techniques become. Why, one educator has even gone so far as to suggest that we are teaching babies "structured babble."

Paul Roth

ATTENTION 165 PAPER TAPE SERVICE USERS

For the past few weeks, UTCC has been conducting a survey of our current users of the Paper Tape Reader in the Sandford Fleming Building. Over the past year, the demand for this service has fallen off dramatically. In addition, several modern terminal devices have been introduced on the market. If we were to replace the Paper Tape Service, these devices would allow users the advantage of self-service input, resulting in an enhanced turnaround. It is very important that we establish contact with all users of the Paper Tape Service so that we may proceed with the analysis of alternatives. The Tape Librarian has asked all users of the Paper Tape Library to complete a very short questionnaire if they have inserted or removed paper tapes from the library in recent weeks. If any user of this survey has not completed one of these surveys, I would ask that you telephone the Librarian (Marnie Posnikoff 978-7319) at your earliest convenience. The questionnaire is short enough to be easily conducted over the telephone in about one or two minutes.

Thank-you in advance for your co-operation.

Derry Cox

SUMMARY OF HSJS CHANGES

PL/C

Release 7.5 of PL/C has been installed. This version of PL/C contains record Input/Output and picture formats. The following changes should be noted:

1. The SOURCE and NOSOURCE statements are no longer supported. Use the SOURCE and NOSOURCE options on the *OPTIONS card to enable/disable the source statement listing.

cont'd...

SUMMARY OF HSJS CHANGES cont'd

2. With the exception of the $JOB, $INCLUDE and $DATA control cards, all other control cards contain a star (*) in column 1. This will be corrected to allow either a star or dollar sign as the first character.

3. The $JOB Card options have been changed:

    a) The SORMGIN option must be followed by an equal sign; the default has been set to read columns 1 through 80. Several routines in the library use column one for formatting the listing of the source program. Place a *OPTIONS Card before the $INCLUDE Card for the routine and include the option SORMGIN=(2,72,1) on this card.

    b) The format for the TIME parameter is TIME=t where t is the execution time limit in seconds.

    c) The list of options in effect is no longer printed, code OPTLIST on the $JOB card to print the options.

4. Scratch files are not currently supported; we are currently working on a solution to this problem.

5. The old version of the compiler can be accessed with a $JOBD Card. (i.e. change the C to a D on the $JOB Card). This version supports scratch files.

6. Some members of the PL/C library have been renamed. To include them type the following:

    ```
    $INCLUDE oldnameC
    ```

    where oldname is the old name

    example $INCLUDE PLOTC

WATFIV

The structured version of the WATFIV compiler has been installed on the HSJS. This version features the structured constructs. The following changes should be noted:

1. The $JOB card is not free format. example:

    ```
    $JOBW ID='MY NAME',LIBLIST,t=3,P=10
    ```

2. There are problems with the scratch files; users experiencing problems should use the old version of the compiler.

3. Output to Unit number 7 (the punch) is not allowed. This will be corrected - punched output will then be directed to the printer and will be included in the execution output.

4. The old version of the compiler can be accessed by changing the W on the $JOBW card to Z.

5. The RUN option and KP options should be punched on the $OPTIONS Card.

6. The line count (lines per page) parameter can be changed by the user. Since WATFIV counts pages and not lines, specifying the LINECNT parameter will affect the total number of pages allowed. The maximum number of pages (p) allowed is 10.

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SUMMARY OF HSJS CHANGES cont'd

This is the default. If the user specifies pages on the $JOB card this limit (p) is set to the minimum of that specified and 10. The number of pages is then set to the following value (using integer division):

`min(max(min(600/linecnt), 1),p)`

Thus, specifying a LINECNT of 600 will allow 1 page of output while a line count of 300 will allow 2 pages. A value of 301 will allow 1 page since, using integer division, 600/301=1.

7. Several routines have been deleted from the WATFIV library. Contact your Computing Co-ordinator if you wish to use any of these routines.

The above changes will be further outlined in an update to USERBOOK.

Mark Tapia

ASG PROGRAM ADVISEMENT

UTCC's Application Support Group (ASG) is responsible for the maintenance of all major source language and interactive processors. As well, the ASG provides specialists in key areas to assist users encountering difficulties.

In the area of statistics, Dr. John Roth (phone 978-6878) is available for consultation. Dr. Roth can provide advice on SPSS, SAS and on DATATEXT.

For information concerning interactive processing (such as WYLBUR, VIP, TSO, SPEAKEASY, ATS and NSCRIPT) contact Mr. Ian DArwin (phone 978-7318).

Mr. Kin Fong (phone 978-4924), formerly involved with source language processor maintenance and advisement, has branched out into the area of plotting (CALCOMP and GOULD). Mr. Fong and Mr. Mark Tapia, the SF Terminal Co-ordinator, are available for advice on plotting problems.

Mr. Ernest Goetze (phone 978-6710) runs the UTCC DATATALK service and advises on APL. Mr. John Bradley, a newcomer to UTCC is involved in a study of Concordances, which is a new area of exploration at UTCC. Mr. Bradley is also available to answer questions concerning APL.

Mr. Herb Kugel (phone 978-7286) is available for discussion of IBM and Non IBM utilities, JCL, exotic tapes, sorts, the Linkage Editor, and specialized or exotic applications of all types.

Questions concerning the ASG should be directed to Mr. Herb Kugel (phone 978-7286).

Herb Kugel

ATTENTION MPSX USERS

MPSX is an IBM Program Product designed to solve large scale linear and separable programming problems. It is currently available on the S/370-165-II and can be accessed via the procedure MPSX.

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ATTENTION MPSX USERS cont'd

UTCC has recently acquired from IBM an enhanced version of MPSX called MPSX/370. This product has improved performance and greater numerical stability than MPSX. Some new features have been added to the control language. As well, the problem file organization has been improved. In addition to the standard control language, an extended control language(ECL), based on PL/I, is available which makes possible an interface between MPSX/370 and user-written programs. ECL allows greater access to the internal matrix data and optimization results and also permits direct modification of the work matrix and problem file.

Most MPSX control programs will require little, if any, modification to run under MPSX/370. Problem files created under MPSX must be translated; MPSX/370 has a special procedure to do just that. The parameters for some procedures(ASSIGN, CREATEM, OPTIMIZE, and REDUCEM) have been altered and the procedure BASIC has been deleted. Other minor differences are discussed in the MPSX/370 _Program Reference Manual_.

MPSX/370 has been installed on the S/370-165-II and can be accessed using the following JCL statements:

```
// EXEC MPSX370
//MPSX.SYSIN DD *
   MPSX/370 program
/*
//GO.SYSIN DD *
   MPSX/370 data
/*
```

The older MPSX does not function properly under MVS and when MVS becomes the production system at UTCC, only MPSX/370 will be available.

For more information, contact Bob Chambers in Room 1202 of the Burton Tower (phone 978-8823).

Bob Chambers

IMSL EDITION 6 NOW AVAILABLE

Edition 6 of the IMSL Library was installed on the IBM S/370-165-II on October 1. In this new edition, approximately 40 routines from Edition 5 have been upgraded and about 40 new subroutines have been included. The improved codes should not create problems with existing programs.

For those unfamiliar with IMSL, it is a library of several hundred routines in the areas of mathematics and statistics; IMSL provides a much broader coverage than the old IBM SSP library. The algorithms used are quite up to date and most routines are available in both single and double precision. Documentation is available at all UTCC terminal locations. For the JCL needed to access the IMSL Library, consult Chapter 3.7MATHAPP of the USERBOOK.

Because of the large size of this library, routines are made available on the system only as they are requested. If one wants to use a routine that has not been put up on the system, contact Bob Chambers at 978-8823 or John Roth at 978-6878. In most cases routines can be added within a few hours.

Bob Chambers and John Roth

NEW VERSION OF DYNAMO INSTALLED

The most recent release of DYNAMO II, Version 4.07, has been installed on the S/370-165-II; the procedures DYNAMO, DCMNTR, and NUMBER have been updated to reflect this change. The JCL statements for these three procedures are as follows:

for DYNAMO,

```
    // EXEC DYNAMO
    //DYNA.SYSIN DD *
         DYNAMO program
    /*
```

for DCMNTR,

```
    // EXEC DCMNTR
    //DCMN.SYSIN DD *
         DYNAMO program
    /*
```

for NUMBER,

```
    // EXEC NUMBER
    //NUMB.SYSIN DD *
         DYNAMO program
    /*
```

DYNAMO, originally developed by the industrial dynamics group at M.I.T., is a compiler for translating and running continuous system simulation modules. It has been used to produce models of business, economic, and social systems and has been designed to simulate systems with extensive feedback networks. Two additional programs (DOCUMENTOR and NUMBER) are supplied which will analyze a DYNAMO source program and produce a cross reference listing for the variables used.

Any enquiries or problems should be directed to Bob Chambers at 978-8823.

Bob Chambers

LINPACK HAS ARRIVED

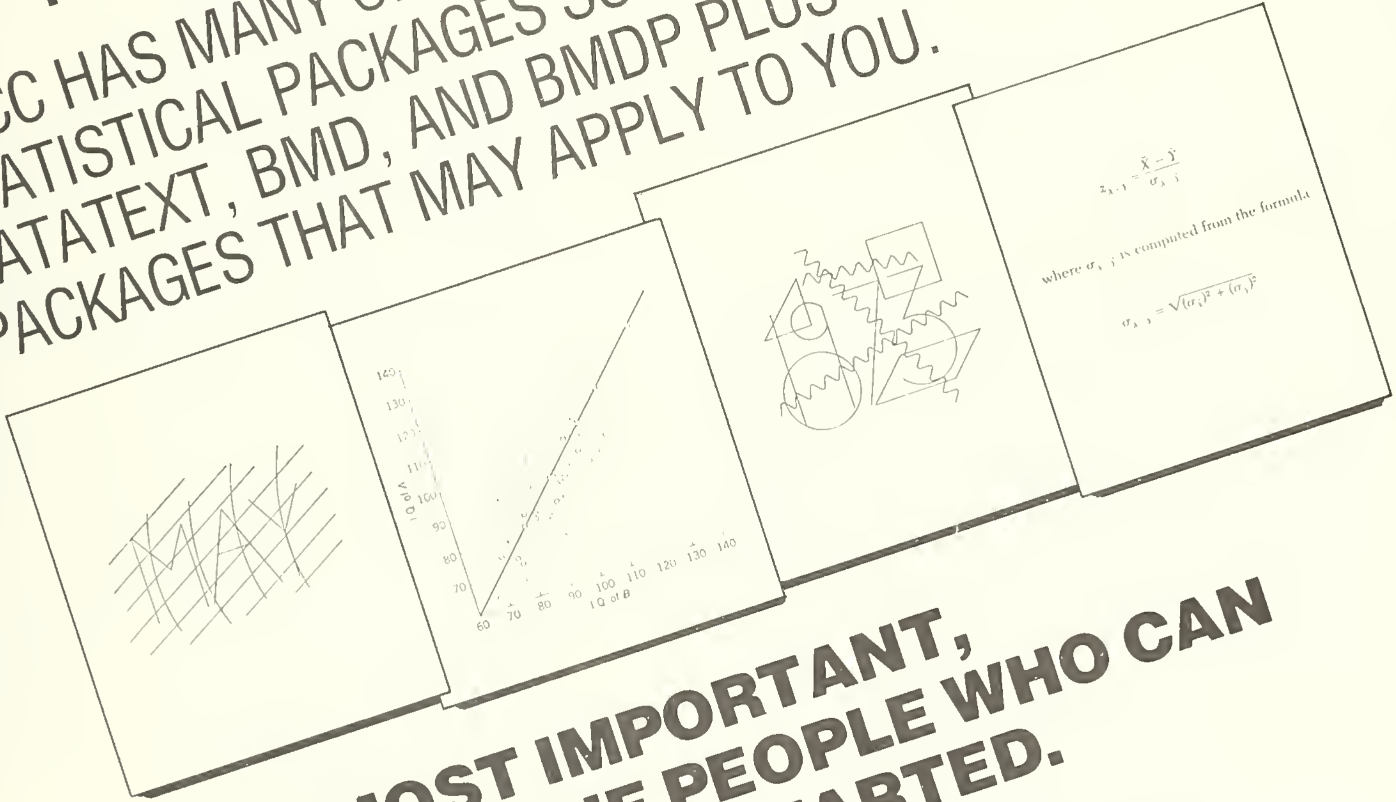
Argonne National Laboratories has released a preliminary version of LINPACK, their latest effort in mathematical software development. The LINPACK subroutines determine the solutions to linear equations and calculate the inverse and/or determinant for different kinds of real and complex matrices (such as general, general band, positive definite, positive definite band, symmetric, etc.) using state of the art techniques. In addition, there are subroutines for solving linear least squares problems. The LINPACK User's Guide is available for reference at both the UTCC Information Office, Room 206, Engineering Annex and the Physics Terminal, Room 1202, Burton Tower.

The double precision, real versions of the subroutines have been installed on the S/370-165-II. Anyone with a linear algebra problem is encouraged to use these first class routines. To access them using a UTCC FORTRAN catalogued procedure, code IX=APPL,LIBRARY='MATH.LINPKLIB' on the EXEC card. If there are any problems, or if additional advice is needed regarding these routines, contact Mr. I. Farkas (phone: 978-8747) or Bob Chambers (phone: 978-8823).

Bob Chambers and Imre Farkas

ARE YOU BOGGED DOWN WITH STATISTICS? WE CAN SIMPLIFY THE PROCESS FOR YOU.

UTCC HAS MANY OF THE COMMONLY AVAILABLE STATISTICAL PACKAGES SUCH AS SPSS, SAS, DATATEXT, BMD, AND BMDP PLUS OTHER SPECIALIZED PACKAGES THAT MAY APPLY TO YOU.



AND MOST IMPORTANT, WE HAVE THE PEOPLE WHO CAN HELP YOU GET STARTED.

FOR FURTHER INFORMATION,
CONTACT THE CUSTOMER
SERVICE GROUP AT 978-6021

UTCC

SIMSCRIPT II.5 UPDATED

Two changes have recently been made to SIMSCRIPT. First, a new release (8G) has been received and installed on the S/370-165-II. This release corrects several minor errors in the previous version and, in addition, provides about a 10% gain in execution speed. Secondly, the catalogued procedures SIM25C, SIM25CGO, SIM25CLG, and SIM25LG have been replaced by the catalogued procedures SIMC, SIMCGO, SIMCLEGO, and SIMLEGO.

For those unfamiliar with SIMSCRIPT, it is a general purpose programming language which encompasses many of the features of FORTRAN, ALGOL, and PL/I. Furthermore, SIMSCRIPT provides programming features specifically tailored to performing discrete event simulation. In this respect, SIMSCRIPT can be a tool of considerable power. The language itself makes extensive use of English-like statements and is clearly described in the publications "SIMSCRIPT II.5 Programming Language" and "SIMSCRIPT II.5 Reference Handbook", both of which can be examined at the UTCC Information Office.

Any problems or general enquiries concerning SIMSCRIPT may be directed to Bob Chambers, in the Burton Tower, Room 1202, phone 978-8823.

Bob Chambers

IEHMOVE WARNING

This is to remind users of IEHMOVE who are backing up source or load libraries onto multiple magnetic tapes that the file being written is defined by IEHMOVE control statements. File information on the JCL (Job Control Language) tape statement is ignored.

To clarify, consider the following sample coding:

```
//  EXEC  PGM=IEHMOVE
//TAPE DD  UNIT=3400-5,LABEL=(2,SL),
//         VOL=SER=N1234,DISP=OLD,...
//SYSIN  DD
        COPY PDS=MYLIB,TO=3400-5=N1234,...
/*
```

In the above, the user specifies LABEL=(2,SL). Presumably, he is attempting to add a second file to the tape. However, this field is ignored by IEHMOVE. The IEHMOVE control statement cited above would write MYLIB as file 1. Thus, the original file 1 is destroyed. Therefore, the correct JCL and control statement to add a second file should be:

```
//   EXEC   PGM=IEHMOVE
//TAPE      DD DISP=OLD,UNIT=3400-5,
//          VOL=SER=N1234
    .
    .
    .
//SYSIN     DD *
    COPY PDS=MYLIB,TO=3400-5=(N1234,2),...
/*
```

Thus, the user should not specify the LABEL parameter on the TAPE DD STATEMENT. However, the user must specify file 2 in the IEHMOVE control statement, as demonstrated above. IEHMOVE users having questions concerning IEHMOVE should contact Herb Kugel, phone 978-7286, or refer to the IBM OS/VS UTILITIES MANUAL.

Herb Kugel

PERSONNEL CHANGES

In addition to September PERSONNEL CHANGES, Bob Parry left the Centre to work at Robert Simpsons Company. Good luck Bob in your new future.

Replacing Bob, is Richard Edwards. Also joining us is Catherine Gillevet who is working in Publications replacing Margo Harvie.

Welcome aboard to you both.

Clara Silva

FAREWELL TO JILL

For the last year, users of AST and ASUT have had the pleasure of having Jill Reece as our Computing Co-ordinator. During this time, many important changes have been implemented at our two locations. But whenever problems arose, Jill was always there to help. Jill is transferring to the Computer Research Facility. We shall all miss her presence. Jill has our best wishes in the new work she will be doing.

Gurpal Singh

RECENT ACQUISITIONS IN THE DEPARTMENT OF COMPUTER SCIENCE LIBRARY

Conway, R.; Gries, D. and Wortman, D.B.
  Introduction to structured programming using PL/1 and SP/k.
Cambridge, Mass., Winthrop Publishers Inc., 1977.

Hill, F.J. and Peterson, G.R.
  Digital systems: hardware organization and design.
New York, Wiley, 1973.

International Conference on Parallel Processing, 1976.
  Proceedings, ed. by P.H. Enslow, Jr.
New York, IEEE, 1976.

Lister, A.M.
  Fundamentals of operating systems.
London, Macmillan, 1975.

SIMULA Users' Conference, Oslo, Sept. 1973.

Wiederhold, Gio.
  Database design.
New York, McGraw-Hill, 1977.

UTCC SYSTEMS

SYSTEM/370 MODEL 165-II

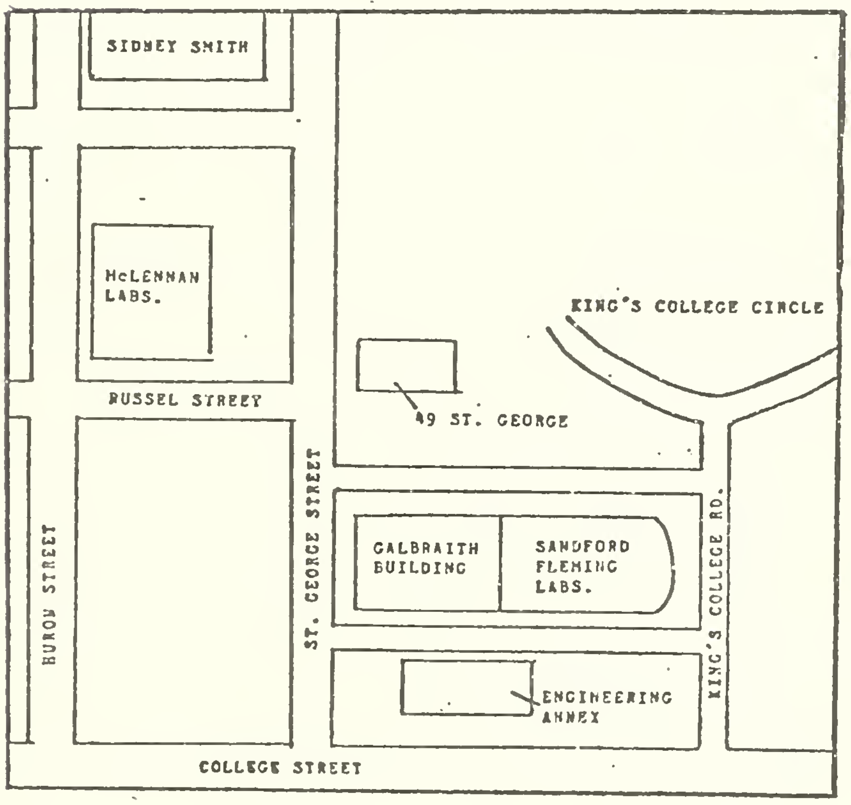
- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream, APL SV, TSO, WYLBUR
- 4 megabytes of memory
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides APL and ATS services
- 1536K bytes of core
- OS/MVT with APL and ATS

COMPUTER RESEARCH FACILITY

- located in SF207
- DEC GT44 System with PDP-11/40 CPU
- DEC GT40 System with PDP-11/05CPU
- provides specialized graphics and interactive graphics
- provides on-line and real-time computing services, data acquisition and minicomputer services



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NOTE:

EA = Engineering Annex
SF = Sandford Fleming
SG = 49 St. George
NP = McLennan Physical (New Physics)
SS = Sydney Smith

JOB AND SYSTEM STATUS QUERIES

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ATS/APL	6234
2741 TERMINAL MALFUNCTIONS	7107
029 KEYPUNCH MALFUNCTIONS	6465

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